

KOTSAR', V.M.; STEPURA, N.N.

Pulse pickups for measuring the length of rolled shapes. Sbor.
rats.predl.vnedr.v proizvod. no.5:25-26 '60. (MIRA 14:8)

1. Makeyevskiy metallurgicheskiy zavod.
(Rolling (Metalwork)) (Electronic instrument)

1. STEPURA, P. F.
2. USSR (60C)
4. **Electric Driving**
7. Strengthening the shaft of an electric motor driving cooler ventilators of an electric train. Rb.energ., 2, no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

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YEGORUSHKIN, Vasilii Yegorovich; KOLB, Vitaliy L'vovich; ~~STEPURE, Mikhail Aleksandrovich~~; TSEPLOVICH, Benjamin Isaakovich;
~~NEKHAY, V.T., red.~~; MORGUNOVA, G.M., tekhn. red.

[Mechanical engineering] Mashinovedenie. Minsk, Izd-vo
M-va vysshego, srednego spetsial'nogo i professional'nogo
obrazovaniia BSSR, 1963. 554 p. (MIRA 16:9)
(Mechanical engineering)

SCV-127-58-8-4/27

AUTHOR: Stepurenko, B.P., Chief Engineer

TITLE: The Application of Hydro-Mechanization at Piezo-Quartz Deposits
(Primeneniye gidromekhanizatsii na p'yezokvartsevyykh mestorozh-
deniyakh)

PERIODICAL: Gornyy zhurnal, 1958, Nr 9, pp 28-30 (USSR)

ABSTRACT: The author describes the exploitation of a piezo-quartz field by a hydro-monitor. Till 1957 the extraction of crystals was done manually and a large part of the crystals and their fragments was lost. The system was investigated by workers of Vsesoyuznyy nauchno-issledovatel'skiy institut p'yezoopticheskogo mineral'nogo syr'ya VNIIP (The All-Union Scientific Research Institute of Piezooptical Mineral VNIIP) and found it to be superior to the previous system. A hydro-monitor was installed 10-12 m from the terrace and a water jet under 5-5.5 atmospheres of pressure was directed on the terrace. A ditch evacuated the obtained pulp on an ore concentrator provided with two sieves under which a bunker was built. The larger pieces of quartz were collected by hand from the first sieve, and the ore from the bunker was evacuated on a conveyor belt. The rest, that passed through a second sieve, went into the sump, where a hydro elevator evacuated the pulp to the terrace.

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SOV-127-58-8-4/27

The Application of Hydro-Mechanization at Piezo-quartz Deposits

From here the water was again evacuated through a well to the canal and pumped to the hydromonitor. As a result of the application of this system, the cost of production of 1 kg of mineral decreased 4.3 times, and the production of 1 worker increased from 7,6 cubic m to 27 cubic m in one shift. There is 1 table and 1 drawing.

ASSOCIATION: Yuzhno-Ural'skaya Gornaya Ekspeditsiya (The South-Ural Mining Expedition)

1. Quartz crystals--Production
2. Water power--Applications

Card 2/2

STEPURENKO, V. T.: Master Tech Sci (diss) -- "Investigation of the effect of hydrogen-sulfide water from the Razdol' sulfur deposit and other aggressive media on the corrosion resistance, corrosion decrepitation, and corrosion wear of steel 45". Kiev, 1953. 11 pp (Acad Sci Ukr SSR, Inst of Construction Mechanics), 150 copies (KL, No 7, 1959, 126)

СЛЕПКА КНИЖКИ, В.Т.

5(1) ПРАВЕ І БОКІ ЕКСПЛУАТАЦІЇ 809/2610
Академія наук Української РР. Інститут металознавства та
металургії

Державні підприємства фізико-технічного металургійного металургійного
(Фізичні, Хімічні, та Металургійні Властивості Металів)
Київ, 1978. 142 с. 1,000 копійок. Друковано.

Вип. №: М.В. Карпенко, Доктор Технічних Наук; М.В. Яценко,
Доктор Технічних Наук; В.Т. Яценко, Доктор Технічних Наук.

МІСЦЕ ВИПУСКУ: Київ, Україна. Видавництво: Технічна література.

ИЗВЕСТИЯ, V. 7

AUTHORS: Yatsyuk, A. I., Stepurenko, V. F.,
Yanchichin, F. P. 32-2-43/60

TITLE: A Device for Testing Metals for Their Fatigue Strength in
Active Liquid Media (Prisposobleniye 'lya ispytaniya
metalla na ustalostnuyu prochnost' v zhi kikh aktivnykh
sredakh)

PERIODICAL: Sverdskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 229-230
(USSR)

ABSTRACT: The given figure and description show that the test samples,
compared to those according to G. V. Akinov (reference 2),
were a little changed, and that at the testing machine of
the type ϵ around the test sample a rubber cylinder with
an inlet and outlet tube was fixed. The liquid, under the
influence of which the test samples are to be stressed, can
be stationary or continuously passing through. The
influence of some liquids upon a perlite-ferrite steel is
shown by curves. They show that the active liquids reduce
the fatigue region compared to the influence of the air. So
investigations of this kind are absolutely necessary for

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A Device for Testing Metals for Their Fatigue Strength in
Active Liquid Media

32-2-43/60

machine parts which are exposed to such media. The device described above has already been used for two years. There are 3 figures and 1 reference, which is Slavic.

ASSOCIATION: Institute of Machinery and Automation AS Ukrainian
SSR (Institut masin ovedeniya i avtomatiki Akademii nauk
USSR)

AVAILABLE: Library of Congress

1. Fatigue (Mechanics)-Testing equipment
2. Metals-Fatigue-Testing equipment

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S/123/E1/000/016/004/020
1104/1104

187400

AUTHOR: Stepanenko, V. ^T

TITLE: Effect of sulfuration on the fatigue strength of steel

PERIODICAL: Referativnyy Zhurnal, Khimicheskaya seriya, no. 6, 1961, 73, abstract
65611 (Nauka, 1961; in Russian; also in Author. AN Ukr-SSR, 1959,
no. 7, 9.-97)

TEXT: Sulfuration increases the resistance to wear and the anti-galling properties of grade 45 steel as well as the fatigue strength, particularly in corrosion media; the increase in fatigue strength can be explained by the presence of considerable residual compression stresses in the subsurface layers of the component, originating during the sulfuration. There are 4 figures and 12 references.

N. Lina

[Abstractor's note: Complete translation.]

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3/021/60/000/006/012/019
A153/A029

AUTHORS: Karpenko, H.V.; Stepurenko, V.T.

TITLE: The Influence¹⁸ of Hydrogen Sulfide¹ on the Plasticity of Steel

PERIODICAL: Dopovidi Akademiyi nauk Ukrayins'koyi RSR, 1960, Nr. 6, pp. 791 - 794

TEXT: ⁴ A study was made to find out the primary causes of the intensive corrosion and the decrease of the plasticity of steels, either due to the anodic processes or the cathodic processes occurring in steels subjected to the effects of humid hydrogen sulfides or aqueous solutions of H₂S. A theoretical explanation of the essence of the above processes is given. It is stated that water saturated with hydrogen sulfide decreases the plasticity of steel not because of anodic processes (formation of a rust layer), but owing to cathodic processes, which produce a hydrogenation of steel. Hydrogen desorption almost fully restores the plastic properties of steel. Cathodic steel polarization in water containing hydrogen sulfide considerably increases the loss of the plasticity of steel. Anodic polarization retains the initial plasticity of steel in hydrogen sulfide

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S/021/60/000/006/012/019
A153/A029

The Influence of Hydrogen Sulfide on the Plasticity of Steel

water. Two mm wires made of Y-7 (U-7)^{1b} steel, containing 0.65% C, 0.4% Mn, 0.22% S were investigated. Figure 1 shows the dependence of the plasticity of steel on the concentration of H₂S and the time of submersion in hydrogen sulfide solution. There are 4 figures. ✓

ASSOCIATION: Instytut mashynoznavstva i avtomatyky AN UkrSSR (Institute of the Science of Machines and Automation of the AS UkrSSR)

PRESENTED: by Yu.K. Delimars'kyy, Academician, AS UkrSSR

SUBMITTED: December 17, 1959

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KARPENKO, G. V., STEPURENKO, V. T.

Effect of the nature of a corrosion medium on corrosion and
corrosion-fatigue resistance of steel. Nauch. zap. IMA AN URSR.
Ser. mashinoved. 7 no. 6:64-69 '60. (MIRA 13:8)
(Steel--Corrosion)

STEPURENKO, V. T.

Effect of the sulfidation on the fatigue strength of steel. Nauch.
zap. IMA AN URSR. Ser. mashinoved. 7 no. 6:91-97 '60.

(MIRA 13:8)

(Steel--Fatigue) (Protective coatings)

STEPURENKO, V. T.

Strength of steel depending on the pressure intensity of rolls
during rolling. Nauch.zap. IMA AN URSR. Ser. mashinoved. 7 no. 6:98-
105 '60. (MIRA 13:8)
(Steel--Testing) (Rolling (Metalwork))

KARPENKO, G.V., *otv. red.*; LEONOV, M.Ya., *doktor fiz.-mat. nauk, zam. otv. red.*; KAIIFYAKEVICH, R.I., *kand. tekhn. nauk, red.*; MAKSIMOVICH, G.G., *kand. tekhn. nauk, red.*; PANASYUK, V.V., *kand. fiz.-mat. nauk, red.*; PODSTRIGACH, Ya.S., *kand. fiz.-mat. nauk, red.*; STEPURENKO, V.T., *kand. tekhn. nauk, red.*; TYNYY, A.A., *kand. tekhn. nauk, red.*; CHAYEVSKIY, M.I., *kand. tekhn. nauk, red.*; YAREMA, S.Ya., *kand. tekhn. nauk, red.*; REMENNIK, T.K., *red. izd-va*; LISOVETS, A.M., *tekhn. red.*

[Machines and devices for testing metals] Mashiny i pribory dlia ispytaniy metallov. Kiev, Izd-vo Akad.nauk USSR, 1961. 132 p. (MIRA 15:2)

1. Akademiya nauk USSR, Kiev. Instytut mashinoznavstva i avtomatyky. 2. Chlen-korrespondent Akad. nauk USSR (for Karpenko). (Testing machines)

S/137/62/000/009/023/033 ..
A006/A101

AUTHORS: Stepurenko, V. T., Soshko, A. I., Litvin, A. K.

TITLE: A unit for technical bending tests of metals in liquid media

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 9, 1962, 104, abstract 9I669
(In collection: "Mashiny i pribory dlya ispytaniya metallov",
Kiyev, AN UkrSSR, 1961, 128 - 131)

TEXT: A description is presented of the design of a unit for bending tests of wire specimens under the effect of surface-active and corrosion media (with possible simultaneous application of the potential) in liquid metals and melts. Results are presented which had been obtained from bending tests of electro-polished "St.45" steel wire specimens, 0.85 mm in diameter. The tests were performed in a 26% H₂SO₄ and 3% NaCl solution in distilled water at different D_c and bending speeds. It was established that with greater D_c the number of bends until the failure of the specimen decreases; the most intensive reduction of the steel ductility occurs at D_c < 2 amp/dm²; the hydrogen brittleness increases with reduced bending speed. It is noted that the unit assures stable results of

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A unit for technical bending tests of...

S/137/62/000/009/023/033
A006/A101

investigations in air, various media and during the application of an electrode potential. There are 9 references.

V. F.

[Abstracter's note: Complete translation]



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S/723/61/000/001/003/005

AUTHORS: Karpenko, G. V., Stepurenko, V. P.

TITLE: The effect of hydrogen-sulfide water on the mechanical properties of steel.

SOURCE: Vliyaniye rabochikh sred na svoystva stali. vyp.1: Sredy, vyzyvayushchiye navodorozhivaniye stali. In-t mash. i avtom. AN UkrSSR, Kiyev, Izd-vo AN UkrSSR, 1961, 27-33.

TEXT: The paper reports experimental tests which show that the impairment of the mechanical properties of a steel during short-term soaking in H_2S water is attributable to hydrogenation and not to corrosion. Desorption of the H restores the initial mechanical properties of the steel almost fully. The investigation was performed on low- and medium-C steels in the form of 1-mm-diam wire (0.07% C, 0.47% Mn, 0.04% S, 0.007% P) and 2-mm-diam wire (0.67% C, 0.44% Mn, 0.029% S, 0.019% P). The wire specimens were degreased and immersed into water containing various amounts of H_2S . Escape of the H_2S during the immersion process was impeded by a 20-mm-thick oil layer floating atop the water. Following immersion for differing periods of time, bending and torsion tests were made on some of the specimens, while other specimens were subjected to drying for the purpose of aging.

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The effect of hydrogen-sulfide water on

S/723/61/000/001/003/005

followed by desorption of the H which had penetrated the steel by means of cathode processes in the H_2S water. The second group of specimens was then also tested for bending and torsion after a prescribed holding time in the drier at differing temperatures. The results of the tests are shown in the form of graphs of the flexural plasticity of the wire vs. time, for different flexural and torsional plasticity of the wire vs. time, for different H_2S concentrations, and it was found that: (1)

Both the anodic and the cathodic process affect the mechanical properties of steels immersed in H_2S water; however, during short-term exposure of the specimens the impairment of the plastic properties occurs through hydrogenation of the cathodic regions only; (2) the losses in plasticity (the decrease in the number of flexural and torsional strains) of the steel specimens after immersion in the H_2S water increases with increasing concentration and with increasing exposure time of the specimen to the medium; (3) the effect of the H_2S water is more pronounced in the torsional tests than in the flexural tests; (4) desorption of the H restores the plastic properties of the steel almost fully; the higher the aging temperature, the faster the plasticity is restored. There are 7 figures and 2 references (1 Russian-language Soviet and 1 French-language original by Bastien-Amiot in Russian translation).

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KARPENKO, G.V.; STEPURENKO, V.T.

Effect of polarization on the plasticity of steel. Vliian.rab.
sred.na svois.stali no.1:34-38 '61. (MIRA 15:5)
(Steel--Corrosion) (Polarization (Electricity))

KARPENKO, G.V.; STEPURENKO, V.T.

Effect of preliminary hydrogen absorption on the corrosion
resistance of steel. Vliian.rab.sred.na svois.stali no.1:39-44
'61. (MIRA 15:5)
(Steel--Hydrogen content) (Steel--Corrosion)

STEPURENKO, V.T.

Tendency of 45 steel to corrosion cracking in hydrogen sulfide
solutions. Vliian.rab.sred.na svois.stali no.l:45-50 '61.
(MIRA 15:5)

(Steel--Corrosion) (Hydrogen sulfide)

S/723/61/000/001/004/005

AUTHOR: Stepurenko, V. T.

TITLE: On an accelerated method for the determination of the tendency of a metal to corrosion cracking.

SOURCE: Vliyaniye rabochikh sred na svoystva stali. vyp. 1: Sredy, vyzyvayushchiye navodorozhivaniye stali. In-t mash. i avtom. AN UkrSSR. Kiyev, Izd-vo AN UkrSSR, 1961, 51-58.

TEXT: The paper describes the results of an experimental investigation which provided a certain addition to the accelerated method of V. M. Nikiforova [see sbornik "Vliyaniye korrozionnykh sred na prochnost' stali (The effect of corrosive media on the strength of steel)", TsNIITMash, book 77, Mashgiz, Moscow, 1955] for the determination of the tendency of a metal toward corrosion cracking. More especially, the present investigation has as its objective the determination by Nikiforova's method of the tendency of steel 45 to corrosion cracking in H₂S water and in other media, and also to show that the change in plasticity and the character of the fracture of specimens depends on the external medium and the state of the metal under deformation. The equipment used in the monoaxial tensile tests within the aggressive medium is shown in cross-section. Nikiforova's equipment KM-12

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On an accelerated method for the determination S/723/61/000/001/004/005

(IM-12) was used at an extension rate of 1.8 mm/min. The corrosive media tested were: Faucet water, a 3% aqueous solution of NaCl, an 18% aqueous solution of NaOH, Hg, MC (MS) oil, and activated $C_{17}H_{33}COOH$, none of which affected the properties of steel 45, which was tested both in the high-frequency-hardened state and after rolling. By contrast, tests in a 26% aqueous of H_2SO_4 reduced the plasticity parameters ψ and δ and the actual tensile strength considerably. Additional tests with the same acid were made at concentrations of 0.5, 1.0, 5.0, 10.0, 18.0, 26.0, and 35.0%. It was concluded from the tests that: (1) Media which evoke the corrosion cracking of steel in simple monoaxial tension will reduce the plasticity characteristics ψ and δ and the true tensile fracture strength, S_k ; an effect on the tensile strength occurs only for an elevated hardness of the steel and an elevated concentration of the surrounding medium; (2) the cracking of a metal, and the modification of its plasticity and the strength characteristics during deformation in liquid media that evoke cracking, may be produced by the hydrogenation of the cathodic regions, the development of microfissures in the anodic zones, diffusion, etc., and, consequently, do not always depend on corrosion processes; (3) the accelerated method does not permit one to determine the tendency of a steel toward corrosion cracking (neither according to the plasticity characteristics nor according to the annular fissures on the surface of the specimens), if the hardness is

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On an accelerated method for the determination S/723/61/000/001/004/005

elevated or the concentration of the medium is low (for example, in H₂S water). The formation of annular fissures on the surface of specimens during tensile fracture testing in media that evoke corrosion cracking depends both on the character of the medium and on the plasticity of the steel. It is not always possible to use the annular fissures as a criterion on the stability of a steel. There are 4 figures and 15 references (13 Russian-language Soviet and 2 English-language: Vollmer, L. V., Corrosion, v.8, 1952, 326; Fraser, I. R., Treseder, R. S., *ibid.*, p.324).

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STEPURENKO, V.T.; LITVIN, A.K.; SOSHKO, A.I.

Reverse bending test of wire specimens with simultaneous hydrogen
absorption. Vliian.rab.sred.na svois.stali no.1:84-87 '61. (MIRA 15:5)

(Wire---Testing) (Steel---Hydrogen content)

KARPENKO, G.V.; STEPURENKO, V.T.

Effect of hydrogen sulfide and polarization on the plasticity
of steel. Zhur. prikl. khim. 34 no.5:1057-1060 My '61.
(MIRA 16:8)

(Steel) (Hydrogen sulfide)

STEPURENKO, V. T.

Scientific session on the physicochemical mechanics of
materials. Izv. AN SSSR. Otd. tekhn. nauk. Met. i topl. no.6:
214-215 N-D '62. (MIRA 16:1)

(Physical metallurgy--Congresses)

S/021/62/000/006/012/013
D251/D308

AUTHOR: Stepurenko, V.T.
TITLE: Scientific session on the problem 'The physico-chemical mechanics of materials'
PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 6, 1962, 835 - 837 .

NOTE: The article is a report of the First Scientific Session on the problem of the physico-chemical mechanics of materials held in Kiyev, April 12-14, 1962, organized by the Viddil tekhnichnykh nauk AN URSS (Department of Technical Sciences of the AS UkrSSR) and the Instytut mashinoznnavstva ta avtomatyky AN URSS (Institute of Machine Science and Automation of the AS UkrSSR). 131 persons from 26 scientific research establishments, institutes of higher education etc. took part. The aim of the session was to disseminate knowledge of general and particular results obtained in these fields and to coordinate the work being done on important aspects of the problem. The chairman of the session, H.V. Samsonov, head of the VTN, AS UkrSSR and Corresponding-Member of the Academy outlined the importance
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Scientific session on the problem ...

S/021/62/000/006/012/013
D251/D308

of the problem. Academician P.O. Rebinder of the Instytut fizychnoyi khimiyi AN SRSR (Institute of Physical Chemistry of the AS USSR) spoke on the problem of finding the optimum conditions of use for materials and the question of the scientific basis and generalized laws of physico-chemical processes. H.V. Karpenko, Corresponding-Member of the AS UkrSSR (L'viv) spoke of the development of the physico-chemical mechanics of materials in the Ukraine. V.Y. Likhtman of the Institute of Physical Chemistry of the AS USSR spoke of the effect of adsorption on the reduction of strength. V.I. Trefilov, Candidate of Physical and Mathematical Sciences from the Instytut metalofizyky AN URSSR (Institute of Metal Physics of the AS UkrSSR) in Kiev, spoke on the basic assumptions of the physics of metal strength from the point of view of dislocations. Professor B.I. Kostets'kyy, Doctor of Technical Sciences, L.F. Kolisnychenko and P.F. Truskova of the Instytut tsyvil'noho povitryanoho flota (Institute of the Civil Air Fleet) spoke on physico-chemical processes in friction, lubrication and wear of metals. Candidate of Technical Sciences R.I. Kryp'yakevich of the Institute of Machine Science and Automation of the AS UkrSSR (L'viv) gave an analysis of the change in the mechanical properties of steel on quenching. Candidate of
Card 2/4

Scientific session on the problem ...

S/021/62/000/006/012/013
D251/D308

Technical Sciences, M.Y. Chayevs'kyi of the Institute of Machine Science and Automation of the AS UkrSSR (L'viv) spoke on the effect of light-metal alloys on the strength and plasticity of steel. Chief Engineer Yu.I. Babey of the Institute of Machine Science and Automation of the AS UkrSSR (L'viv) spoke on dependence relations between cutting regimes. Candidate of Physical and Mathematical Sciences V.V. Panasyuk and Junior Research Worker S.Ye. Kovchyk of the Institute of Machine Science and Automation of the AS UkrSSR (L'viv) gave a direct method of determining the intensity of breakdown energy of a fragile body. Candidate of Physical and Mathematical Sciences Ya.S. Pidstryhach of the Institute of Machine Science and Automation of the AS UkrSSR (L'viv) spoke on the thermo-diffusion theory of the deformation of solid bodies. V.V. Panasyuk also spoke on 'Some three-dimensional problems of the theory of the spreading of flaws'. Candidate of Technical Sciences N.A. Lanher of the Instytut elektrozvaryvannya imeni Ye.O. Patona AN URSR (Institute of Electro-welding im. Ye.O. Patona, of the AS UkrSSR) in Kiyev spoke on the corrosion of low-carbon steel. Doctor of Chemical Sciences L.I. Antropov of the Polytekhnichnyy instytut (Polytechnic Institute) in Kiyev spoke on the surface charges of metals. Candidate of Technical
Card 3/4

Scientific session on the problem ...

S/021/62/000/006/012/013
D251/D308

Sciences V.K. Hrishin (Moscow) spoke on the experimental investigation of frictional couples in liquid sodium. Research to be done in the field of the physico-chemical mechanics of materials for the period 1961-1980 was considered and a scientific coordination committee was set up.

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STEPURENKO, V.T.; BABEY, Yu.I.; KARPENKO, G.V.

Effect of mercury on the strength and alternating bending
testing of steel. Nauch.zap.IMA AN URSR.Ser.mashinoved. 9:34-36
'62. (MIRA 15:12)

(Steel--Testing)

(Mercury)

STEPURENKO, V.T.; LITVIN, A.K.; KARPENKO, G.V.

Effect of an acid medium and a superposed potential on the
alternating bending testing of steel. Nauch.zap.IMA AN URSS.
Ser.mashinoved. 9:51-54 '62. (MIRA 15:12)
(Steel--Testing)

YANKOVSKIY, L.A.; STEPURENKO, V.T.; BABEY, Yu.I.

The IMA-~~101~~ machine for fatigue testing of metals subjected to repeated variable bending in the plastic area. Nauch.ap.IMA
AN URSR.Ser.mashinoved. 9:77-79 '62. (MIRA 15:12)
(Fatigue testing machines) (Metals--Testing)

BABEY, Yu. [Babai, IU.], inzh. (L'vov); STEPURENKO, I., kand. tekhn.
nauk (L'vov)

What is metal fatigue. Znan. ta pratsia no.6:10-11 Ja '62.
(MIRA 16:7)

(Metals--Fatigue)

S/198/62/008/005/009/009
D234/D308

AUTHOR: Stepurenko, V. T.

TITLE: First scientific conference on physico-chemical mechanics of materials in the Ukraine

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR, Instytut mekhaniky. Prikladna mekhanika, v. 8, no. 5, 1962, 575-577

TEXT: A scientific council has been set up in the section of technical sciences of the AS UkrSSR, charged with the coordination of research in the above field in the Ukraine. This council is to work in conjunction with the commission of AS USSR for the same problem (presided over by P. O. Rebinder, Member of the AS USSR). Especially extensive investigations have been carried out at Instytut mashynoznavstva i avtomatyky AN URSSR, L'viv (Institute of Machine Science and Automation, AS UkrSSR, L'viv) into the theory of adsorption fatigue, adsorptional-electrochemical theory of corrosion fatigue, theory of hydrogen brittleness, influence of low-temperature melts of metal. Several practical recommendations have

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D234/D308

First scientific conference ...

been given. The first scientific conference on this problem took place on April 12-14, 1962, in Kiev. V. G. Samsonov, Director of Byuro VTN AN URSR (VTN Bureau of AS UkrSSR) discussed the problems and results, and the coordination of scientific investigation in this field. There were 131 participants representing 26 institutes, among them 7 institutes of the AS UkrSSR and 2 of the AS USSR. The following read papers at the conference: P. O. Rebinder, Institut fizichnoy khimii AN SSSR (Institute of Physical Chemistry of the AS USSR): General characteristics and basic tasks of the new branch. H. V. Karpenko, Corresponding Member of the AS UkrSSR, Institute of Machine Science and Automation, AS UkrSSR: Results obtained by Ukrainian scientists. He proposed a classification of surrounding media according to their effect on surface-active substances on static and cyclic fatigue of metals and the effect of hydrogen on mechanical properties of steel. V. Y. Likhtman, Doctor of Physical and Mathematical Sciences, Institute of Physical Chemistry, AS USSR: Mechanism of adsorptional decrease of strength. It was pointed out that the most important problem in the field is the preparation of materials whose strength would be close to the

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S/198/62/008/005/009/009
D234/D308

First scientific conference ...

theoretical. Candidate of Physical and Mathematical Sciences, V. I. Trefilov, of the Instytut metalofizyky AN URSSR (Institute of Metal Physics of the AS UkrSSR): Basic principles of the strength of metals from the point of view of the dislocation theory; possibilities of increasing their strength. Candidate of Technical Sciences, A. Ya. Artamonov, of Instytut metalokeramiky i spetsial'nykh splaviv AN URSSR (Institute of Metal Ceramics and Special Alloys, AS UkrSSR): The mechanism of guided process of destruction of surface layers during treatment by electric pulses, the effect of basic factors on the quality of surface, estimation of the effect of an external medium. Doctor of Technical Sciences, Professor B. I. Kos-tets'kyi, Senior Engineer L. F. Kolisnychenko, and Aspirant P. F. Truskov of Instytut tsyvil'noho povitryanoho flotu (Institute of Civil Aviation, Kiev): Processes during friction, lubrication and wear of metals, strengthening and weakening of friction surfaces taking into account the effect of external medium, diffusion and thermal processes. Candidate of Technical Sciences R. I. Krypyake-vych (IMA AS UkrSSR): Hydrogen brittleness of steel; alteration of mechanical properties of the latter and the mechanism of its fail-

Card 3/5

First scientific conference ...

S/198/62/008/005/009/009
D234/D308

ure. Candidate of Technical Sciences M. Y. Chayevs'kyy (IMA AS UkrSSR): Strength and plasticity of steel; a method for decreasing or eliminating the diffusion processes is proposed. Engineer Yu. I. Babey (IMA AS UkrSSR): Effect of 'technological heredity', connected with cutting processes, on fatigue strength of steel in active media. Candidate of Physical and Mathematical Sciences V. V. Panasyuk, and Junior Scientific Coworker S. Ye. Kovchyk (IMA AS UkrSSR): A method of direct determination of the intensity of failure energy of brittle bodies as a characteristic of strength; some experimental data on the effect of active media. Candidate of Physical and Mathematical Sciences Ya. S. Pidstryhach (IMA AS UkrSSR): Thermal diffusion theory of deformation of solids. By methods of thermodynamics of irreversible processes a system of differential equations is deduced, taking into account the relation between heat conduction, diffusion and deformation. Candidate of Physical and Mathematical Sciences V. V. Panasyuk (IMA AS UkrSSR): Some 3-dimensional problems of crack propagation; equilibrium of a brittle body weakened by an elliptic crack. Candidate of Technical Sciences N. A. Lanher, Instytut elektrozvaryuvannya im. Ye. O.

Card 4/5

First scientific conference ...

S/198/62/008/005/009/009
D234/D308

Patona (Institute of Electric Welding im. Ye. O. Paton): Increasing the corrosion resistance of welded joints of low-carbon steel in alkaline media by thermomechanical decrease of residual stresses. Doctor of Chemical Sciences L. I. Antropov, Kyivskyy politekhnichnyy instytut (Kiev Politechnic Institute): Surface charge of metals and work function of electrons. Candidate of Technical Sciences V. K. Grishin (Moscow): Experimental investigation of friction pairs in NaOH; the results are explained by adsorption effect of strength decrease. The conference approved the general plan of scientific research in Ukraine for 1961-1980, and the scientific coordination council for physico-chemical mechanics, presided by H. V. Karpenko, and found it necessary to publish a scientific review of the AS UkrSSR 'Physico-chemical mechanics of materials'.

Card 5/5

ACCESSION NR: AT4023777

S/2723/63/000/002/0067/0076

AUTHOR: Karpenko, G. V.; Stepurenko, V. T.; Babey, Uy. I.; Shul'te, Yu. A.;
Mikhaylov, P. A.

TITLE: Corrosion resistance and fatigue strength of ShKh15 steel after electroslag
smelting

SOURCE: AN UkrRSR. Insty*tut mashy*noznavstva i avtomaty*ky*, L'viv. Vliyaniye
rabochikh sred na svoystva materialov (Effect of active media on the properties of
materials), no. 2, 1963, 67-76

TOPIC TAGS: electroslag steel, electroslag remelting, steel ShKh15, steel corrosion
resistance, steel fatigue strength, corrosion, corrosion resistance

ABSTRACT: The Institut elektrosvarki im. Ye. O. Patona AN USSR (Institute of
Electric Welding) has developed a method of electroslag smelting which is now in wide
use to decrease the number of nonmetallic inclusions and thus increase the corrosion
resistance of steel. The purpose of the present paper was to determine the effect of re-
smelting on contamination of ShKh15 steel with oxides, sulfides, and air bubbles and the
corrosion resistance and corrosion-fatigue strength of this steel, in both the perlite-
ferrite and martensite states, in 3% sodium chloride. The results showed that electroslag

Card 1/3

ACCESSION NR: AT4023777

smelting of ShKh15 steel in the ZMI machine decreased the content of impurities by 2-2.5 units and the porosity at the center by 0.5 units. As shown in the Enclosure, smelting increased corrosion resistance by up to 15% in 3% sodium chloride, but increased it only insignificantly in air. Smelting increased the corrosion-fatigue strength of ShKh15 steel by up to 40% in the martensitic hardened condition and by up to 20% before hardening. However, lowering the quantity of impurities below a certain value did not affect the corrosion and corrosion-fatigue strength of the steel. "The thermal treatment was carried out by F. P. Yanchishin (Cand. Tech. Sci.) and Eng. K. P. Tabinskiy." Orig. art. has: 4 figures, 4 tables and 3 formulas.

ASSOCIATION: Insty*tut mashy*noznavstva i avtomaty*ky*, AN UkrSSR , Lvov
(Institute of Machine Technology and Automation, AN UkrSSR)

SUBMITTED: 00

DATE ACQ: 10Apr64

ENCL: 01

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

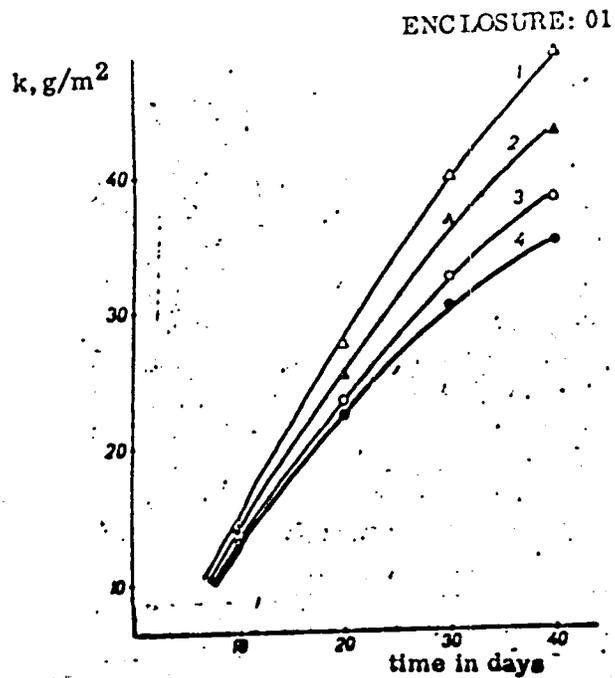
2/3

Card

ACCESSION NR: AT4023777

Fig. 1 - Corrosion losses of steel ShKh15 in relation to time in 3% sodium chloride:

1 - steel from a usual smelt (melt No. 314822), perlite-ferrite; 2 - steel after electroslag smelting (melts No. 18, 28, 33), perlite-ferrite; 3 - steel from a usual smelt (melt No. 314822), martensite; 4 - steel after electroslag smelting (melts No. 46, 48, 53), martensite.



Card

3/3

РІСЬ, Я. П.; МІХАЙЛЮК, В. П.; ПАРЕНКО, Н. П.

Effect of cold working and inherent properties on the cor-
rosion resistance and fatigue strength of steel following its
preliminary corrosion. Villat.rab. used na svais. mat. no. 177-
26. 1963. (MIRA 17:10)

KARPENKO, G.V. [Karpenko, H.V.]; SEMURENKO, V.T.; BABEY, Yu.I. [Babei, IU.I.]

Dependence of the corrosion fatigue strength of steel on test conditions.
Dop. AN UkrSR no.3:366-368 '63. (MIRA 17:10)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR. 2. Chlen-korrespondent AN UkrSSR (for Karpenko).

L 55857-65 EWT(m)/EPF(c)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWP(z) MJW/JD/WE

ACCESSION NR: AR5014025

UR/0277/65/000/003/0010/0010
620.178.3:669-426

25
B

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod. Otdel'nyy vypusk, Abs. 3.48.73

AUTHOR: Karpenko, G. V.; Stepurenko, V. T.; Babey, Yu. I.

TITLE: Corrosion fatigue strength of ShKh15 steel after electroslag remelting

CITED SOURCE: Sb. Korrozion. ustalost' metallov, L'vov, Kamenyar, 1964, 105-112

TOPIC TAGS: electroslag remelting, corrosion fatigue, corrosion resistance, impurity content, steel fatigue, saline corrosion / ShKh15 steel

TRANSLATION: The study concerned the effects of electroslag remelting of ShKh15 steel on the content of impurities (oxides, sulfides and globules), as well as on corrosion resistance and corrosion fatigue strength of the steel in a 3% solution of NaCl. Electroslag remelting increased the corrosion resistance of the steel in 3% NaCl (up to 15%). Improvement of endurance in air was slight, but the process produced a significant increase of the corrosion fatigue strength of martempered (up to 40%) and normalized (up to 20%) steel. Bibl. with 4 titles.

SUB CODE: MM
Card 1/1

ENCL: 00

L 55859-65 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWA(d)/T/EWP(t)/EWP(l)/EWP(b)/EWP(z)/EWP(k)/
 EWP(h)/EPP(o) Pf-h MJW/JD/WB
 UR/0277/65/000/003/0011/0011
 669.14.018:620.194.8

41
40
B

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsei i raschet detaley mashin. Gidroprivod. Otdel'nyy vypusk, Abs. 3.48.77

AUTHOR: Babey, Yu. I.; Stepurenko, V. T.; Karpenko, G. V.

TITLE: Effect of pre-corroding on the fatigue strength of steel

CITED SOURCE: Sb. Korrozion. ustalost' metallov. L'vov, Kamenyar, 1964, 74-87

TOPIC TAGS: precorrosion treatment, corrosion fatigue, steel corrosion, surface machining, saline corrosion, atmospheric corrosion, steel fatigue, aggressive environment / steel No. 45

TRANSLATION: The study concerned the resistance of variously treated and machined steel No. 45 against atmospheric corrosion and corrosion caused by periodic wetting in a 3% solution of NaCl, as well as the effect of these types of pre-corroding treatment on the subsequent fatigue strength of steel in relation to machining operations. Fatigue tests were carried out on VIMA-30 fatigue testers, using $10 \cdot 10^6$ cycles in air and $50 \cdot 10^6$ cycles in the corrosive environment as a basis.

Card 1/2

L 55859-65
ACCESSION NR: AR5014027

Roller-burnished steel 45 exhibited the best resistance to atmospheric corrosion or corrosion induced by alternate wetting and drying. Machining of the steel surface by high-speed cutting insured better corrosion resistance than machining by pressure cutting or standard turning. Pre-corroding by alternate wetting in a 3% solution of NaCl and drying improved the corrosion fatigue strength of pressure-cut steel in 3% NaCl, but most strongly reduced the wear in air. The wear resistance of samples machined by high-speed cutting and standard turning was less sensitive to pre-corroding treatment. The corrosion fatigue strength of pre-corroded samples of steel No. 45, machined by high-speed cutting or standard turning, did not vary in an aggressive corrosion environment. Bibl. with 4 titles. I. Potapov

SUB CODE: MM

ENCL: 00

Card 2/2

L 62072-65 EPF(c)/EWP(k)/EWP(z)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWA(d)/EWP(l)/
EWP(v)/EWP(t) Pf-4 MJW/JD/WB

ACCESSION NR: AR5014035

UR/0277/65/000/003/0030/0030
620.194.8

30
8

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktssi i raschet detaley mashin.
Gidroprivod. Otdel'nyy vypusk, Abs. 3.48.224

AUTHOR: Karpenko, G.V.; Stepurenko, V.T.; Babey, Yu. I.

TITLE: Methodolgy of corrosion fatigue testing of metals

CITED SOURCE: Sb. Korrozion. ustalost' metallov. L'vov, Kamenyar, 1964, 155-161

TOPIC TAGS: steel corrosion fatigue, corrosive medium feed, atmospheric oxygen,
cathodic shielding, structural steel, fatigue testing, steel passivity

TRANSLATION: The authors investigated the effects of corrosion medium feed pattern,
agitation of the medium and access of air on the corrosion fatigue of structural steel
No. 40, employing the tester MUI-6000 for simple bending tests with rotation in air, a
3% solution of NaCl and distilled water (N = 5 million cycles in air and 20 million cycles
in corrosive media). The more intensive the agitation of the corrosive medium and the
greater the access of atmospheric oxygen, the greater the decrease in steel fatigue

Card 1/2

L 62072-65

ACCESSION NR: AR5014035

strength in 3% NaCl. Free access of atmospheric oxygen passivates the steel during tests in distilled water, so that its fatigue strength increases when compared with tests with impeded access of air. The conditions under which experiments on cathodic shielding of steel from corrosion fatigue in 3% NaCl are carried out can significantly affect the results obtained in such tests, i.e. nearly total protection of the steel is attained in a corrosive medium at rest, while protection can not be obtained in a medium in motion. It is recommended that only such data on corrosion fatigue tests be considered which indicate the method of corrosive medium feed to the samples along with the characteristics of the tested material and medium, type of stress applied, and number and frequency of the cycles.

SUB CODE: MM

ENCL: 00

Card 2/2

STERNIK, G. F.

"The Effect of a Biologically Full-Value Protein Fodder on Growing Piglets." Cand Agr Sci, Kishinev, Agricultural Institute M. V. Frunze, Min Higher Education USSR, Kishinev, 1954. (VL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

STEPURIN, G.F.

Q-5

USSR/Farm Animals - Swine.

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2614

Author : G.F. Stepurin

Inst :

Title : Concerning the Full Value of Protein Feed Provided for the Growing Young Stock (The Utilization of Proteins by the Growing Young Stock, Depending on the Quality of the Protein).

Orig Pub : Tr. Stavropol'sk. s-kh. in-ta, 1956, vyp. 7, 261-268

Abstract : An interchange experiment was made with similar pigs. Each group consisted of two pigs. The difference of the lysine content of the rations as compared to the rations of the control group was plus 35 and plus 70%. A comparison of the amino acid content of protein in pork and of protein in rations, demonstrated that the utilization of proteins in the rations is a factor in establishing the minimum quantity of lysine.

Card 1/1

1

Dynamics of the protein, mineral content, and carotene in corn depending on the stage of vegetation. Z. K. Stepurina (Agr. Inst. Stavropol). *Zhivotnovodstvo* 1956, No. 3, 78. The content of proteins in the stage of stalk and tassel formation is 27.5-31.1%, in the stage of blossoming it decreases to 19.3%, and in the stage of the milky and waxy ripeness it reaches 24.3-7.0%. During the growth the contents of Ca and P increase and the ratio between them (2:1) remains const. In the stage of the stalk formation it contains 65.7 mg./kg. of carotene.
M. Charmandsrian

STEPURKO, M.P.

Simple method for determining the adhesion factor. Avt.dor. 24 no.
2:29 F '61. (MIRA 14:3)
(Dynamometer) (Tires, Rubber—Testing)

STEPURO, M. A.

Stepuro, M. A.

"Investigation of the operation of chain drives using roller-bushing chains." Acad Sci Belorussian SSR. Department of Physicomathematical and Technical Sciences. Minsk, 1956.
(Dissertation for the Degree of Candidate in Technical Sciences).

Knizhuaya i topis'
No. 21, 1956 Moscow.

STEPURO, N.T.; TIMOFEYEV, A.A.; YUDINTSEV, D.A.; BESHROZVANNYY, G.S.

Surfacing with precast concrete. Avt. dor. 27 no. 3:23-25 Mr '64.
(MIRA 17:5)

STEPURO, S.I.

STEPURO, S.I.; FILIPENOK, T.G., redaktor; PINCHENKO, S.I., tekhnicheskii
redaktor

[For over-all economy in state enterprises; the work practice of
the Grozny Oil Refinery and Lubricant Factory] Z kompleksnuiu ako-
nomicnu gosudarstvennykh sredstv; iz opyta raboty groznenskogo nef-
tamaslozavoda. Grozny, (Groznskoe knizhnoe izd-vo, 1953. 30 p.
(Grozny--Petroleum--Refining) (MLRA 8:7)

MITROFANOV, M.G.; STEPURO, S.I.; SEROV, V.V.; KVASHNIN, K.V.

Experience in the industrial purification of asphalt from sulfur-bearing crude with the aid of a selective double-solvent. Trudy GrozNII no. 4:166-171 '59. (MIRA 12:9)
(Asphalt) (Petroleum--Refining)

STEPURO, S. I.

MATSKIN, L.A.; KOVALENKO, K.I.; BABUKOV, V.G.; KONSTANTINOV, N.H.;
PONOMAREV, G.V.; PAL'CHIKOV, G.N.; PELENICHKO, L.G.; SHAMARDIN,
V.M.; GLADKOV, A.A.; BRILLIANT, S.G.; SHEVCHUK, V.Ya.; SOSHCHEN-
KO, Ye.M.; ALEKSANDROV, A.M.; BUNCHUK, V.A.; KRUPENIK, P.I.;
MAYEVSKIY, V.Ya.; YELSHIN, K.V.; GAK, Kh.A.; POTAPOV, G.M.;
KARDASH, I.M.; STEPURO, S.I.; KAPLAN, S.A.; SELIVANOV, T.I.;
YEREMENKO, N.Ya.; ZHUZH, A.D.; USTINOV, A.A.; GIRKIN, G.M.;
VOLOBUYEV, P.P.; CHERNYAK, I.L., nauchnyy red.; DESHLALYT, M.G.,
vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Combating losses of petroleum and petroleum products; materials
of the All-Union Conference on Means of Combating Losses of
Petroleum and Petroleum Products] Bor'ba s poteriami nefi i
nefteproduktov; po materialam Vsesoiuznogo soveshchaniya po bor'be
s poteriami nefi i nefteproduktov. Leningrad, Gos.nauchno-tekhn.
izd-vo nefi i gorno-toplivnoi prom-stri, 1959. 157 p. (MIRA 13:2)

1. Nauchno-tekhnicheskoye obshchestvo nefyanoy i gazovoy pro-
myshlennosti.

(Petroleum industry)

24826

S/081/61/000/011/031/040

B103/B202

15.6400

AUTHORS: Bogdanov, N. F., Mitrofanov, M. G., Stepuro, S. I.,
Sergeyeva, M. I.

TITLE: Production of low-solidifying oils by the method of
extractive deparaffination

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 11, 1961. 483, abstract
11M192 (11M192). ("Tr. Groznensk. neft. n.-i. in-t", vyp. 7,
1960, 93 - 103)

TEXT: In the course of the extractive deparaffination at the Groznenskiy
neftemaslozavod (Groznyy Petroleum Refinery) up to 65 % oil with a
solidification point of -30 to -32°C is obtained from the MC-20 (MS-20) oil
of the Zhiriovskaya petroleum freed from paraffin when treated with
dichloroethane benzene at temperatures of from -35° to -38°C. It is ex-
pedient to apply extractive deparaffination as an additional treatment to
the conventional processes of deparaffination in the apparatus available.
A scheme is given. [Abstracter's note: Complete translation.]

Card 1/1

SELEZNEV, A.K.; STEPURO, S.I.; Primalni uchastiye: PANTELEYEVA, T.M.;
LITVINOVA, L.I.; PONOMAREVA, G.F.; MARDIYANTS, Z.A.

Use of β -chloroethyl ether mixed with dichloroethane for
deparaffining aviation lubricants. Zhur. prikl. khim. 34 no. 5:
1179-1180 My '61. (MIRA 16:8)

1. Groznenskiy neftyanoy institut i Groznenskiy neftemaslo-
zavod.

(Lubrication and lubricants)

S/065/62/000/011/001/006
E075/E436

AUTHORS: Pal'chikov, G.F., Mezhlumova, A.I., Krichko, A.A.,
Kaganer, G.S., Stepuro, S.I., Brovenko, A.V.

TITLE: Extraction of aromatic hydrocarbons from middle
petroleum fractions and catalytic gas oils with
aqueous pyridine

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.11, 1962,
19-25

TEXT: Following the laboratory work reported previously
(Khim. i tekhnol. topliv i masel, no.4, 1961) trial batches of
aromatic extracts (400 to 500 kg) were obtained on a pilot plant
scale from a catalytic gas oil and kerosene - gas oil fractions
from Anastasiyevka crude. The extraction was carried out using
aqueous solution of technical pyridine (boiling point range
114 to 134°C). The feed saturated with pyridine vapour meets
the pyridine solution in the extractor. Countercurrent
extraction takes place, the raffinate and the extract solutions
leaving the opposite ends of the extractor. For the extraction
of the kerosene - gas oil fraction the raffinate contained 30% by
Card 1/2

Extraction of aromatic ...

S/065/62/000/011/001/006
E075/E436

volume of pyridine (water free) and the extract solution - 80.7% pyridine, 10% water and 9.3% extract. The extraction was conducted at 15°C. The extract constituted 32 to 35% of the feed and contained about 80% aromatic hydrocarbons. The extract with 50% of the aromatic hydrocarbons was obtained with the yield of 70%. The extracts were subjected to high temperature hydrogenation. For the extract from the catalytic gas oils the yield of naphthalene obtained by the hydrogenation was 30%. For the kerosene - gas oil fraction about 20% yield of naphthalene was obtained and 40% of a solvent containing 95% of aromatic hydrocarbons. There are 1 figure and 7 tables.

ASSOCIATION: SNKh Checheno-Ingushsk. ASSR

Card 2/2

S/065/62/000/012/002/005
E075/E135

AUTHORS: Seleznev, A.K., and Stepuro, S.I.
TITLE: Application of β -chloroethers mixed with dichlorides
for the low temperature dewaxing of oils
PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.12, 1962,
11-14
TEXT: Oils MC-14 (MS-14) and MC-20 (MS-20) were dewaxed
with β -chloroethyl ether (35% and 40%) and dichloropropane (65%
and 60%). The ratio of the solvent to oil was 4:1, liquid propane
being used to cool the mixture. After dewaxing with
 β -chloroisopropylethyl ether - dichloropropane mixtures at -40°C ,
oils MS-14 and MS-20 gave products with the pour point of
 -37.5 to -39.5°C in about 85% yield. The pour point was lowered
to -40°C by mixing 90 parts of the dewaxed oils with 10 parts of
the 50% residue of transformer oil from Anastas'yevka crude
dewaxed with a dichloroethane-benzene mixture. There are 3 tables.
ASSOCIATION: Groznenskiy neftyanoy institut, Groznenskiy
neftemaslozavod (Groznyy Petroleum Institute,
Groznyy Refinery)

Card 1/1

SELEZNEV, A.K.; STEPURO, S.I.

Preparation of β -chloroethyl ether from ethylene by a vapor-phase method. Zhur.prikl.khim. 35 no.6:1387-1389 Je '62. (MIRA 15:7)

1. Laboratoriya organicheskoy khimii Groznenskogo neftyanogo instituta i laboratoriya Groznenskogo neftemaslozavoda.
(Ethyl ether) (Ethylene)

NAZARETOVA, N.B.; GOLOMSHTOK, I.S.; BASHILOV, A.A.; KUZNETSOV, A.A.;
STEPURO, S.I.

Certain problems involved in the recovery of solvents.
Nefteper. i neftekhim. no. 11:18-21 '63. (MIRA 17:5)

1. Groznenskiy neftemaslozavod i Groznenskiy neftyanoy institut.

STEPURO, S.I.; BOGDANOV, N.F.; GLADYSHEV, V.P.

Adopting a paraffin-distillate processing installation in
the new paraffin shop of the Grozny Petroleum Lubricant Plant.
Trudy GrozNII no. 15:195-200 '63. (MIRA 17:5)

ACCESSION NR: AT4016002

S/2625/63/000/015/0220/0228

AUTHOR: Artem'yeva, O. A.; Marty*nenko, A. G.; Stepuro, S. I.

TITLE: Production of MS-20 aviation oil from the mixed petroleum of the Upper Cretaceous deposits of the Chechen-Ingush ASSR

SOURCE: Grozny*. Neftyanov nauchno-issledovatel'skiy Institut. Trudy*, no. 15, 1963. Tekhnologiya pererabotki nefti i gaza. Neftekhiya (Technology of processing petroleum and gas. Petroleum chemistry), 220-228

TOPIC TAGS: petroleum, aviation oil, aromatic hydrocarbon, refined product, petroleum concentrate, petroleum extract, deparaffination, petroleum refining

ABSTRACT: Due to the opening of the Volgogradskiy neftepererabaty*vayushchiy zavod (Volgograd Refinery), the amount of zhirnovsk crude (from Volgograd oblast) available for the production aviation oil at the Grozny* refinery will gradually decrease. The authors therefore experimented with the refining of local petroleum from new deposits in the Chechen-Ingush ASSR and Stavropol'kray. The yields, physical properties and chemical composition of aviation oil, residual oil, petroleum concentrates, deparaffinated oils and petrolatum from various sources in this region are tabulated. The results show that MS-20 aviation oil obtained by processing local groznensk petroleum by the current technological methods

ACCESSION NR: AT4016002

corresponds to the specifications of GOST 1013-49 for aviation oil, except that the density is 0.897 instead of 0.895. The chemical composition of MS-20 aviation oil from this source is close to that of aviation oil from zhirnovsk petroleum except that it has a higher content of resinous products and a lower content of aromatic hydrocarbons. The sample of MS-20 aviation oil obtained from groznensk petroleum completed the test in a one-cylinder engine (ASH-82FN cylinder) during 50 hours of operation and can be recommended for further testing in a full-size engine. Russian petroleum concentrates from various sources in this region can be used for preparing residual oils since they contain 3.5-5.5% residual oil with a viscosity of 22-38 centistokes at 100C. Increased work with deparaffination techniques and the duosol apparatus is recommended. Orig. art. has: 7 tables.

ASSOCIATION: Neftyanoy nauchno-issledovatel'skiy institut, Groznyy (Petroleum Scientific Research Institute)

SUBMITTED: 00

DATE ACQ: 31Jan64

ENCL: 00

SUB CODE: FP

NO REF SOV: 004

OTHER: 000

Card

2/2

DROZIN, A.P.; ZAMANOV, V.V.; KRICHKO, A.A.; LOZOVY, A.V.; MAKAR'YEV, S.V.;
MEZHLEMOVA, A.I.; PAL'CHIKOV, G.F.; STEPURO, S.I.

Combined arrangement for the use of thermal-cracking kerosine.
Khim. i tekh. topl. i masel 9 no.6:18-24 Ja'64 (MIRA 17:7)

1. Giprogrozneft', Institut goryuchikh iskopayemykh AN SSSR i
Grozneftekhimzavody.

SELEZNEV, A.K.; STEPURO, S.I.; Prinimali uchastiye: PONOMAREVA, G.F.;
LITVINOVA, L.I.; RAKITSKAYA, N.M.; REVIAGINA, M.I.

Using β -chloroethers in a mixture with dichlorides for low-
temperature dewaxing of lubricants. Izv. vys. ucheb. zav.;
neft' i gaz 6 no.4:55-57 '63. (MIRA 16:7)

1. Groznenskiy neftyanoy institut i Groznenskiy neftemaslovyy
zavod.

(Lubrication and lubricants)
(Ethers) (Chlorides)

KRICHKO, A.A.; DOLYAVITSKIY, L.V.; REZHILINA, A.I.; PALCHIKOV, G.F.;
SKOVRODEK, B.K.; STEPUNO, S.I.

Obtaining dearomatized catalytic-cracking gas oil and motor tests for it.
Nefteper. i neftekhim. no.3:12-14 '65. (MIRA 18:8)

1. Institut goryuchikh iskopnyaykh, Grozneftekhinzavody i
Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i pelucheniya iskusstvennogo zhidkogo topliva.

L 7951-66 EWT(m)/EPF(c)/T DJ
ACC NR: AP5025001

SOURCE CODE: UR/0286/65/000/016/0062/0062

AUTHORS: Seleznev, A. K.; ⁴⁴Stepuro, S. I. ⁴⁴

98
B

ORG: none

TITLE: Method for deparaffinization of mineral oils. ⁴⁴ Class 23, No. 173871

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 62

TOPIC TAGS: lubricating oil, *mineral oil*, deparaffinization, dichloropropane

ABSTRACT: This Author Certificate presents a method for deparaffinization of mineral oils. To obtain low melting oils and a positive deparaffinization gradient, a mixture of dichloropropane and β -chloroether is used as solvent. The mixture consists of 40% β -chloroether.

SUB CODE: 11 / SUBM DATE: 04Aug62

SC

Card 1/1

UDC: 665.545.3

L 30247-66 EWT(m)/T WE
ACC NR: AP6013820 (A)

SOURCE CODE: UR/0318/65/000/012/0003/0005

AUTHOR: Pal'chikov, G. F.; Mezhlumova, A. I.; Kaganer, G. S.; Stepuro, S. I.;
Krichko, A. A.; Titova, T. A.

42
38
B

ORG: Grozneftekhimzavody Association (Ob'yedineniye Grozneftekhimzavody); Institute of Mineral Fuels, AN SSSR (Institut goryuchikh iskopayemykh, AN SSSR)

TITLE: Processing of catalytic gas oils by extraction with pyridine and hydrogenation

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1965, 3-5

TOPIC TAGS: pyridine, solvent extraction, gas oil fraction, hydrogenation, naphthalene, petroleum product, gasoline

ABSTRACT: The paper describes the results of an extractive separation of catalytic gas oils from low-sulfur and sulfur feed stock by means of wet pyridine and the results of the hydrogenation of the extracts. The extractive separation of the gas oils was carried out in a continuous unit with a vertical countercurrent extractor provided with a pulsed packing of perforated metal discs. The output of the unit was 1 liter/hr. The degree of separation of aromatic hydrocarbons from gas oil was 70-75%; for bicyclic hydrocarbons, 95%. The extract from the low-sulfur gas oil was used directly as the feed stock for the hydrogenation. It is concluded that catalytic gas oils produced by refineries in the southern and eastern regions of the Soviet Union can be

UDC: 665.5.521.4.66.061.5

Card 1/2

L 30247-66

ACC NR: AP6013820

used to obtain naphthalene (10-13% yield), high-quality diesel oil (53-66% yield), and a stock (18% yield) for the production of carbon black and aromatized gasoline. N. F. Danil'chenko and I. L. Tsitron participated in the study. Orig. art. has: 2 tables.

SUB CODE: 11,07/

SUBM DATE: NONE / ORIG REF: 004

Card 2/2 CC

KRICHKO, A.A.; KOTOVY, A.V.; KOTIKOVA, A.I.; KALICHENOV, G.F.;
STREKO, S.I.; TITOVA, T.A.; i initsiala uenastie PAVIKOVICH, T.M.

Production of phenanthrene from the low-sulfur gas oils from
catalytic cracking. Khim. i tekhn. topl. i masel 10 no.12:
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Increasing wear resistance of the threshing apparatus of the
SK-4 combine. Trakt. i sel'khoz mash. no.5:38-40 My '65.
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STEPUSHIN, A.Ye., veterinarnyy vrach

Raising young pigs in electrically heated houses. Veterinaria
41 no.1:102-103 Ja '64. (MIRA 17:3)

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STEPUSHKINA, T.A.

Effect of partial deafferentation on the functional state of vagal
nucleus. Vest LGU 15 no.15:133-140 '60. (MIRA 13:8)
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RUDASHEVSKIY, S.Ye.; BRAYNINA, E.G.; GUSEL'NIKOVA, K.G.; STEPUSHKINA, T.A.

Physiological rest and stimulation of spinal centers. Vest.LGU 15
no.21:137-149 '60. (MIRA 14:4)

(Spinal cord) (Electrophysiology)

STEPUSHKINA, V. A.

Thermal decomposition of benzoyl peroxide in a mixture of solvents: benzene and nitrobenzene, and nitrobenzene and carbon tetrachloride. G. A. Kazuayev, B. N. Morozanov, and V. A. Stepushkina (State Univ., Gorki). *Zhur. Obshchei Khim.* 23, 1979-81 (1953).—In the thermal decompn. of Bz_2O_2 , the Ph radicals react with both C_2H_6 and $PhNO_2$, the former being the preferred reaction. In this system after refluxing on a steam bath there are formed 1.48 moles CO_2 , 0.07 mole mixed nitrobiphenyls (*p*-isomer isolated), an appreciable amt. of $BzOH$, some Ph_2 (about 0.09 mole), an appreciable amt. of tar. In $PhNO_2$ - CCl_4 , the preferred reaction is with the CCl_4 , yielding C_2Cl_4 , 0.31 mole $PhCl$, 0.06 mole nitrobiphenyls, 0.84 mole H_2O , 0.07 mole phthalic acid, and 0.83 mole CO_2 . G. M. Kosolapoff

(4) 9

NA

STEPUSHKINA, T.A.

Effect of partial limitation of the inflow of afferent impulses
on the functional state of the cerebral cortex based on electro-
encephalography. Vest. LGU 17 no.15:76-85 '62. (MIRA 15:8)
(CEREBIAL CORTEX)

ACC NR: AP6021440

SOURCE CODE: UR/0413/66/000/011/0047/0048

INVENTORS: Ostroverkhov, N. T.; Ovchinnikov, A. I.; Popov, V. K.; Stepushina, V. I.

ORG: none

TITLE: Method for controlling the minimum diameter of an electron beam spot. Class 21, No. 182250

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 47-48

TOPIC TAGS: electron beam machining, electron beam

ABSTRACT: This Author Certificate presents a method for controlling the minimum diameter of an electron beam spot for pulsed electron beam fabrication of materials in a vacuum. To simplify the focusing process, the thermoemission current from the fabricated part or from the control sheet is measured and the focusing lenses are controlled so that the maximum thermoemission current is obtained. To eliminate the effect on the electron beam of the electric field produced by the thermoemission current measuring circuit and to eliminate errors produced by secondary and primary electron currents, measuring voltage pulses are supplied in the intervals between the working pulses.

SUB CODE: 13,09 / SUBM DATE: 20Apr65

UDC: 537.581:621.365.91

Card 1/1

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anemia. In German. p. 451. (Acta Clinica, Vol. 6, No. 1/4, 1956, Budapest,
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Lodz.

STERA, Sławomir, mgr inż.

Influence of certain factors of technology and design on the operation of suction presses. Przegl papier 18 no.11:348-352 N '62.

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Influence of the bobbin on the work of the press of a paper machine. Przegł. papier 20 no.8:254-256 Ag'64

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1. Department of Paper Manufacture and Paper Machines of the
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